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PROCEEDINGS
OF THE
AMERICAN PHILOSOPHICAL SOCIETY.

VOL. I. NOVEMBER & DECEMBER, 1839. No. 9.

Stated Meeting, November 1.

Present, twenty-two members.

Mr. Du PONCEAU, President, in the Chair.

The following donations were received:—

FOR THE LIBRARY.

Astronomical Observations, made at the Royal Observatory, Edinburgh. By Thomas Henderson, F.R.S.E., &c. Vol. II. For the year 1836. Edinburgh, 1839.—*From the Royal Society of London.*

Nieuwe Verhandelingen der Eerste Klasse van het Koninklijk-Nederlandsche Instituut van Wetenschappen, Letterkunde en Schoone Kunsten te Amsterdam. Vols. I. to V. inclusive. Amsterdam, 1827 to 1836. *From the Royal Institute.*

Proceedings and Debates of the Convention of the Commonwealth of Pennsylvania, to propose Amendments to the Constitution, commenced and held at Harrisburg, on the second of May, 1837. Thirteen Volumes. Harrisburg, 1837 to 1839.—*From Mr. C. J. Ingersoll.*

Journal of the Convention of the State of Pennsylvania, to propose Amendments to the Constitution, commenced and held at the state capitol in Harrisburg, on the second of May, 1837. Two Vols. Harrisburg, 1837, and Philadelphia, 1838.—*From the same.*

Third Annual Report on the Geology of the State of Maine. By Charles T. Jackson, M. D. Augusta, 1839.—*From Mr. John Sergeant.*

Reports on the Ichthyology and Herpetology of Massachusetts. By D. Humphreys Storer, M. D.—*From the Author.*

Carte Générale de l'Empire d'Allemagne, par M. Chauchard. Paris, 1791.—*From Mr. Du Ponceau.*

Carte de la Partie Septentrionale de l'Italie, par M. Chauchard. Paris, 1791.—*From the same.*

Renati Descartes Principia Philosophiæ. Amsterdam, 1692.—*From Mr. William Kintzing.*

Friderici Wilhelmi Pestel Commentarii de Republicâ Batavâ. Leyden, 1782.—*From Mr. John Vaughan.*

Meteorological Essays and Observations. By J. Frederic Daniell, F.R.S. London, 1827.—*From the same.*

New Remedies: the Method of preparing and administering them; their Effects on the healthy and diseased Economy, &c. By Robley Dunglison, M. D. Philadelphia, 1839.—*From the Author.*

The Select Medical Library. Six Volumes. Philadelphia, 1838 and 1839.—*From the Editor.*

The Eclectic Journal of Medicine. Edited by John Bell, M. D. Vol. III. Philadelphia, 1839.—*From the Editor.*

The American Journal of Science and Arts. Conducted by Benjamin Silliman, M. D., LL. D., aided by Benjamin Silliman, jr., A.B. Vol. XXXVII. Nos. 1 and 2. For July and October. New Haven, 1839.—*From the Conductors.*

A letter was read from the Secretary of the Geographical Society of Paris, announcing the purpose of that society to form a Geographical Museum, and inviting contributions from the members of this society.

The Committee, consisting of Dr. Bache, Dr. Patterson and Mr. Booth, to whom the paper of Doctor Hare, read at the last meeting of the society, was referred, entitled, “Description of an Apparatus for deflagrating carburets, phosphurets, or cyanides, in vacuo, or in an atmosphere of hydrogen, between electrodes of charcoal; with an account of the results obtained by these and other means, especially the isolation of calcium, and formation of a new fulminating compound. By R. Hare, M. D., Professor of Chemistry in the University of Pennsylvania,” reported in favour of publication in the Society’s Transactions. The publication was ordered accordingly.

The apparatus is of a convenient construction for the purposes designated in the title of the paper. The lower electrode or cathode is a parallelopipedon of charcoal, on which the body is placed, to be subjected to the influence of one or more batteries; and tubes, with valve-cocks, communicating with an air-pump, a barometer-gauge, and a reservoir of hydrogen, open into the interior of a ground plate, on which a bell-glass is fitted, air tight. In the experiments of the author, an equivalent of lime was heated with one equivalent and a half of bicyanide of mercury, in a porcelain crucible, enclosed in the alembic made for this purpose, and described in a former paper. (See p. 131 of these Proceedings.) The weight of the residue was such as would result from the union of an equivalent of calcium with an equivalent of cyanogen. This was then subjected to galvanic action on the cathode of the apparatus, the anode being brought in contact with it, and the result was the production of masses on the charcoal, having a metallic appearance.

Phosphuret of calcium, exposed in the same manner, in the galvanic circuit, left pulverulent matter which effervesced in water, and, when rubbed on porcelain, appeared to contain metallic spangles, which were rapidly oxidized in the air.

In one experiment, particles of charcoal, apparently fused or resembling plumbago, dropped from the anode.

After heating lime with bicyanide of mercury, the mass was dissolved in acetic acid, in which nitrate of mercury produced a copious white precipitate, that detonated under the hammer like fulminating silver.

Doctor Coates announced the formation of the Pathological Society of this City, and adverted to some of its labours.

Doctor Hare made some observations on the method of obtaining oxygen from nitre.

He stated that the usual opinion of chemists, that the residuum is a hyponitrite in case the process is stopped during the extrication of pure oxygen, is erroneous; as he found that it always contained, under these circumstances, a considerable portion of undecomposed nitre. If the heat was pushed in order fully to change the nitre into hyponitrite, there was always an extrication of nitrogen.